1955

Accounts payable, receivable, and billings

Gordon L. Murray

Accounts Payable, Receivable, and Billings

By Gordon L. Murray
Systems Manager, Chicago Office

Presented at a Forum on "Business Management and Administrative Techniques," Held at McGill University, Montreal — February, 1955

The accounts payable, receivable, and billing functions do not currently enjoy the attention in accounting literature, discussion groups, and professional meetings as is being given to profit planning, direct costing, budgetary control and similar matters. However, the necessity to bill our customers, collect our accounts, and pay our indebtedness have been basis functions in commerce since the beginning of time.

It is very easy to lose sight of the importance of these operations and forego a continuous re-examination aimed at improving our effectiveness in these areas.

The advent of automation, electronics, and other startling developments in business methods does not indicate that any of these three functions are to be eliminated. On the contrary, these new tools will require re-focusing attention on these, as well as other, somewhat prosaic accounting operations.

WHY SHOULD WE RE-EXAMINE THESE FUNCTIONS?

To More Effectively Manage Our Funds

A basic responsibility, if not the prime responsibility, of every management of a business enterprise, is the proper and profitable utilization of the funds entrusted to it by the owners of that business. This implies that management is expected to do an effective job of "funds management" as well as turn in a creditable performance in engineering, sales, production and the other areas of management.

An effective "funds management" performance results from rotating available working capital through the cycle from raw material through inventories, receivables and back into the bank account at a rate which produces a maximum return on the capital employed. In performing this job we run into any number of problems. We make errors in our sales forecasts and wind up with inventories we can't sell. We extend credit to the wrong people or on the wrong terms and cannot collect our money within reasonable periods. We overexpand

our facilities and convert working capital into fixed investments. We make mistakes in areas where we are dealing with elements over which we may have only partial control, i.e., forecasting future conditions, transactions with outsiders, uncertainties of the market, etc.

We also make mistakes in our own shop and in areas where we do have more complete control over the variables. The methods employed in handling our accounts payable, receivable, and billing operations fall largely within the "controllable" classification.

An effective "funds management" performance, as far as payables, receivables, and billings are involved, requires as a minimum, that:

Billings for goods shipped or services rendered shall be made promptly and in good form.

Credit will be extended with prudence, but only after there has been a realistic evaluation of what comprises a reasonable business risk.

Accounts receivable shall be accurately recorded, adequately controlled, and expeditiously collected.

Payables shall be liquidated accurately, within discount periods, and in such manner as safeguards the firm's credit position.

All of these functions shall be performed in an economical manner, as we do not want to pay any more for these services than is necessary.

Adequate internal control shall be provided. This is particularly important in the operations we are discussing here.

To Increase Profits

Payable, receivable, and billing operations obviously do not relate as directly to profits as sales or production. They do not add anything to the value of the product or service produced. However, a relationship to profit does exist. Profits are affected by the cumulative effect of a lot of little things as well as the more dramatic events represented by increases in sales, lowered production cost, and new products. For example, a poor billing job or unsophisticated accounts receivable and collection technique can cause the loss of an account. Recently I observed a situation where a company was experiencing this very problem. Briefly, the facts are:

a. This concern manufactures on a contract basis for a number of other companies. Shipments are made to the contracting companies' plants or are shipped by the manufacturer to distributor or

field warehouse locations, as instructed. The manufacturer bills the contracting company for each shipment and settlement is made on the basis of a monthly statement. Billing and receivables operations are somewhat more complex than is often encountered due to the volume involved, the variety of shipping points, and the necessity to handle returns and other adjustments.

b. The contracting company uses the manufacturer's billings as the basis for invoicing the ultimate customer and these invoices are prepared continuously throughout the month.

c. Due to turnover in personnel and other factors not pertinent here, the manufacturer was not able to render accurate invoices in all instances. As errors were found subsequent to the mailing of invoices or as the contracting company caught them, corrected invoices were put through. This often required the contracting company to re-invoice his customer also.

d. Accounts receivable were recorded on a bookkeeping machine and these records were backed up with an open file of invoices in which new billings were inserted and paid billings were pulled. They were not able to keep the machine posted records up to date and in balance with controls. Someone decided the open invoice file was probably more accurate than the posted record. To meet month-end requirements they adopted the practice of preparing open item statements from the invoice file. The invoice file was an informal rather than an official record and was therefore not subject to the predetermination of totals and other controls which should be associated with this means of handling accounts receivable. Statements were not accurate in many instances.

e. This situation became so serious, one of the major contracting companies served an ultimatum on the manufacturer. They were satisfied with the product and the price but would be forced to discontinue further contracts unless the billing and receivable problems were resolved.

f. This problem was corrected by improving supervision over billing and by discontinuance of the machine posted records in favor of the open file method of handling accounts receivable - but subject to the proper controls. This method offered advantages due to the large number of billings to a relatively few accounts which were liquidated in total, monthly, on the basis of an open item statement. A machine operation resulted in several hundred debits to an ac-

count during a month and normally a single payment credit would clear the account. The usual requirements for aging receivables did not exist so this advantage of a machine posted operation was not available.

This example involves an extreme case of potential profit impact due to ineffectiveness in handling receivables and billings. A similar effect on your profits can be expected whenever these jobs are performed inadequately. You may not be so fortunate as to have them brought to your attention before an account is actually lost.

Bad debt losses or an unrealistically tight credit policy also strikes a blow at the profit column. A bad debt loss of $10 in a company earning 10% on sales requires $100 in sales, which would not otherwise be obtained, in order to recoup the loss.

On the other hand, your credit policy must not be so tight that it is allowed to override opportunities of obtaining additional sales volume at reasonable risk. Too often credit policy is established on the basis that a zero bad debt loss is the desirable standard. This is not true.

I know of firms who adopt the position that if no bad debt losses are generated they are probably turning away an undue amount of business to their competitors. One of these firms also takes the position that if they are not sued every so often they must be too lenient in their business affairs. I suppose you could carry this to the point where you consider yourself a bit stupid if you have never had a strike. I do not go this far, but suggest there is a middle ground where an optimum balance can be achieved. You might consider giving your credit manager a quota or budget for bad debt losses and expect him to meet it the same as you expect your sales people to meet their quotas. Taking him off a zero standard would not hurt his morale, may well bring in additional business, and some of the sales people might even get to like having him around.

A number of other instances illustrating the profit impact arising from payable, receivable, and billing functions, such as lost cash discounts, could be cited. The main point is that you should look for the profit dollars involved in performing these tasks.

To Cope With Change

Change is a very important force which necessitates a continuous re-examination of our methods of handling payables, receivables, and billings. Change almost always affects procedural practices in a company.

Some forms of change are gradual and require close inspection if they are to be detected and their effects determined. Other changes are more sudden, dramatic, and are easily recognized. In the first case there is danger that they go undetected and we continue to perform our accounting routines in a continuous manner - we run into the need for more overtime, then additional personnel, billings become delayed, discounts are missed, closings are slowed up.

How many of us have information which permits us to follow trends in clerical work? How many of us regularly review, on a trend basis, such simple statistics as numbers of checks written, vouchers processed, billings, accounts, cash remittances, etc.? The review of such basic data is one aid in detecting gradual changes, determining causes, forecasting future conditions, and most important - taking effective action.

Gradual Change:

A case in point was a company using a lot cost system of accounting and a lot release system of production control. However, they controlled materials on the basis of minimum-maximums, purchasing for inventory within these limits.

As a matter of manufacturing and material control policy the previous system was changed and procurement was placed on a lot basis. The new procedures provided for procurement of a lot's worth of major raw materials and purchased parts for each lot run. It should be pointed out that there were always a number of lots running concurrently and therefore a number of lot procurements were in process at any one time.

The accounting personnel were unaware of this policy change or at least failed to associate it with their activity.

As the program got under way the number of purchase orders began gradually to increase. Purchases of many items were being made every thirty to sixty days rather than two to four times per year.

The amount of business the company was doing and the dollar volume of purchases were running at the same rate as in the past which gave no warning to the accounting people. However, the processing of accounts payable began to bog down and this department began to incur more and more overtime.

An investigation disclosed that the number of vouchers and checks had been increasing each week for some time. The cause was traced back to the new procurement policy. As this policy was to be followed indefinitely it required that the accounts payable procedures be re-

examined in the light of the increased volume of work to be processed.

In this instance, the problem was resolved by mechanizing these procedures to a greater extent than had been justified by the previous work load.

Sudden Change:

In another instance there was a sudden change in the business practice and one department realistically evaluated its effect and one did not.

This company had always marketed its product through distributors. There were 300 to 400 distributor accounts of which 100 contributed over 80% of total sales volume. As a result accounts receivable and credit problems were at a minimum.

After a careful study, management decided upon a drastic change in its marketing policy in order to obtain closer control over the retail outlets for its products. It was decided to eliminate the distributor and sell directly to retailers. Here was a decision which required sudden and basic changes in the traditional methods of operation.

Instead of thoroughly re-examining the billing and accounts receivable procedures, the accounting department reasoned: more accounts mean a greater volume of work; more work will require more people and equipment. They proceeded on that basis.

A realistic appraisal would have revealed additional problems and requirements not provided for in their basic procedure. The back order problem became much more complex. There was need for more frequent and detailed agings of the accounts and other reports for credit purposes. Due to these and other unanticipated problems, billings and accounts receivable became major problems within a few months after the enactment of the new distribution policy.

This company finally solved this problem by eliminating typewriter prepared billings on fan-fold forms, and bookkeeping machine posted accounts receivable, in favor of a tabulating card system of billing from a tub of pre-punched cards and use of an open file of summary punched cards for accounts receivable.

The credit department did perform an adequate evaluation of the problem. They concluded that this change required a completely new approach from a credit standpoint and that present methods would not suffice. A credit manager, from another company in a comparable industry, was employed and a new credit department was organized.

While the examples cited here may appear to be extreme, they actually occurred. Comparable problems are arising daily as a result of change. There is a natural reluctance in everyone's human nature to recognize and accept change. This makes it easy to develop the habit of going along with traditional methods which have outlived their effectiveness.

HOW SHOULD THESE PROBLEMS BE APPROACHED?

Granting that accounts payable, receivable, and billing are important functions worthy of at least periodic review and evaluation, we next need to consider an approach. How does one go about this?

The solution to most any problem involves several basic steps:

Define the problem and determine your specific objectives. This is the most important step and it can be said that a proper determination of the real problem is often half the solution.

Determine the alternatives which apply to the problem. What are the various possible courses of action?

Evaluate the alternatives - in terms of the objectives previously defined.

Select that alternative which most nearly meets the requirements of your objective. Perfection will seldom be achieved - most realistic solutions lie in arriving at an optimum set of compromises.

As we proceed let us keep this formula - if you will - in mind and see how it can be applied in re-examining and evaluating payable, receivable, and billing procedures.

Define Objectives

Let us consider a billing operation as an example. At first glance it would appear that the objectives of a billing operation are obvious: to provide a suitable document for presentation to our customer, to notify him that certain services have been performed or goods delivered, and that payment of a certain amount is due in accordance with certain terms.

If you proceeded to study your billing operation in accordance with so limited an objective it is doubtful if any major achievement would result.

A more searching analysis will reveal that the problem is much more complex. If you look back of the billing point you find that you previously had to perform certain procedural operations which are very closely related to the billing function.

1. Upon receipt of the customer's order you had to initiate action to call items out of stock, initiate production or procurement of items ordered, or initiate the flow of services to that customer.
2. Action was also required to establish or review the customer's credit standing.
3. Action also had to be taken to arrange for shipment and perform related traffic functions.
4. Provision had to be made for adjusting inventory records for the transaction.

Subsequent to the preparation of the billing itself there also are a number of closely related operations:

1. The billing forms are eventually used as media for recording accounts receivable.
2. Sales analysis is prepared from billing copies.
3. Cash receipts must be identified to a particular account and invoice.
4. Cost of sales computations often require use of billing copies.
5. Billing copies are used in accounting for sales commissions.

In addition to procedures occurring both prior and subsequent to the billing operation the problem involves the actual billing process and provision for exceptions.

The billing operation involves a determination of:

1. Customer name and address.
2. Shipping destination.
3. Items ordered.
4. Quantities.
5. Prices, discounts, and terms.
6. Method of shipment and routing.
7. Extensions and footings.

Among the exceptions which must be provided for are:

1. Back orders for items not presently available for shipment - both orders completely back ordered and partial back orders.
2. Returned goods and allowances which bring in the matter of credit memoranda and transactions which are in effect "reverse" sales and billings.

Therefore, what at first appeared to be a rather simple problem, easily defined, now looks much more complex and with many more ramifications. This closer analysis reveals that any attempt to review

and evaluate the billing operation immediately brings us into a whole series of operations involving shipping and production documents, credit, traffic, inventory control, accounts receivable, cash receipts, sales analysis, sales commissions, back orders, returned goods, customer allowances, etc.

This brings us back to our original premise - to properly define the problem and determine objectives is the most important step in solving any problem. This is easy to say and sounds obvious, and is obvious, yet it is very frequently ignored or abused in practice.

Consider Cycles of Work

Some of you may be thinking, "you mean that if I have a problem in my billing department or if I want to review and evaluate my billing operation, I must get into such other operations as receivables, sales analysis, etc.?" The answer is yes, if you expect to achieve real and lasting results. It would be an uncommon instance where substantial improvement in billing could be achieved, and the creation of problems in other areas be avoided, unless the problem were approached on an overall basis determined by correctly defining the problem.

Therefore, it is proposed that consideration be directed not at billing as an isolated function, but at the entire series of events of which billing is a part. In other words the entire cycle of work - in this instance the "billing cycle". It begins with the receipt of an order and ends with the receipt of cash and includes the intervening steps, in so far as they are related to, or affected by, order processing.

This matter of considering cycles of work or functions is fundamental to a successful evaluation of procedures. It has been my observation that on occasion manufacturers of office equipment may be guilty of violating this principle. They have a piece of equipment to sell which is usually designed to perform a specific function or closely related functions. The approach is basically one of saying, "here is a piece of equipment which will produce the documents you are preparing faster". This approach to the problem ignores the necessity to consider the entire cycle of work in which their piece of equipment is but a part. The customer should make sure he has studied a properly defined cycle of work before final equipment selections are made.

Companies investigating punched-card tabulating applications for the first time almost always find themselves forced into consideration of entire cycles of work. This occurs despite the fact that the investigation usually was initiated in a search for a solution to a single, ap-

parently isolated, problem. A realistic investigation of tabulating equipment reveals the economic desirability of making full use of equipment and multiple use of each card punched. You seek additional applications for the equipment in order to "load it" economically. Therefore you might as well start out your investigation on the basis of a cycle of work rather than a limited, isolated function. I would like to cite an example to emphasize the importance of this approach and how its violation can result in only partial solutions.

The Company:

This company was engaged in the production and distribution of approximately 800 items. Orders were received from salesmen on company order blanks, from customers on their own purchase order forms, on a variety of coupons, return post cards used in direct mail promotions and advertisements, on individuals' personal stationery - in other words there was quite a variety to the source and form of incoming orders.

They were doing several million dollars in sales volume but with an average order size of less than $20. This meant that it took many turns of the crank to reach that sales volume. It also meant that efficient means of order processing, billing, accounts receivable, and collections were essential if there was going to be anything left to pay to the income tax collector at the end of the year.

The major steps in their procedures were these:

1. Receive the order.
2. Edit order for item identification, price, address, salesman's code, etc.
3. Pass to biller who prepared a multicopy, continuous billing set on an electric billing typewriter with interleaved carbon paper attachment.
4. Pass order and billing set to checker.
5. Pass to tally clerk who had a tally rack on which the quantity of each item on the invoice was entered on a line for that item and at that unit price. (They had a price structure providing for different prices for an item depending upon the quantity ordered.)
6. Tally sheets were removed from the billing department racks weekly, and taken to the accounting department. Here they were placed over a price card, identical to the tally racks, and comptometer operators would crossfoot quantities on each line, and extend by the price for that line. These were totaled and balanced to the

totals of the billings. For those of you who might be interested in this method of summarizing sales by product, the tally sheets and billings usually come quite close to balancing. A plus or minus limit was established and so long as differences fell within that range, no effort was made to locate the errors. Little trouble was experienced in balancing.

7. Accounts receivable were handled by posting invoices and cash receipts to a statement and ledger card on a conventional bookkeeping machine.

8. Sales by salesmen were determined by sorting a copy of the billing by salesmen and taping on an adding machine.

These procedures resulted in several things:

1. Complete billing set with necessary copies for customer, shipping, packing list, accounts receivable, etc.
2. Dollar sales analyzed by product.
3. Unit sales analyzed by product.
4. Machine posted accounts receivable record.

A Problem:

The first problem which occurred was an ever increasing backlog in the accounts receivable operation due to a steady increase in sales. This increase in sales was largely attributable to increased numbers of customers resulting from an expanded sales effort and added products. The average size of the order showed little change. This phenomenon was a characteristic of the business largely beyond the control of management.

This problem forced the company to re-examine the accounts receivable operation. In so doing, they defined the problem as one of increasing the capacity for handling accounts receivable without an undue increase in cost.

The company determined that they had two prime alternatives, i.e., add additional equipment and personnel to provide additional capacity, or change to a completely different method. As the prospect of additional capital investment and fixed clerical expense did not appeal to them, they concentrated on the second alternative.

It was reasoned that if you do not want to acquire additional equipment, perhaps you should abandon equipment altogether. Their analysis also revealed that the average customer only purchased twice per year and in the great majority of instances old balances were paid

prior to the next purchase. This resulted in one open item per account, in most cases.

They evaluated the alternatives and concluded that under their circumstances a file of ledger cards largely comprised of single open items and a file of invoices were essentially the same thing. Therefore, machine posted accounts receivable ledgers were abandoned in favor of the open invoice file method.

This procedure worked out quite satisfactorily and took the pressure off the receivables operation.

The Real Problem:

The accounts receivable problem had no sooner been placed under control than the effects of the increasing volume of business began to create problems in the Sales Department.

As we noted earlier, two types of sales statistics were being produced, i.e., unit and dollar sales by product and total dollar sales by salesman.

The Sales Department wanted to do a more sophisticated job of sales control than had previously been performed. This required sales statistics showing sales of each salesman - by product, sales to each customer, as well as other classifications. These data were to be used to rearrange sales territories, to establish salesmen's quotas, and to serve as the basis for an incentive pay plan.

Present methods were not able to cope with these new demands. Management then called for an examination and evaluation of present procedures in order to come up with a method to meet these expanded requirements. The memory of the struggles in developing the new accounts receivable procedures was very fresh in their minds and the attitude was pretty much - "here we go again."

One person said, "Well, we just revised our accounts receivable and this required a new invoice-billing set of forms. There is a 2-year supply in the stockroom which cost us a lot of money. I don't care what you do about this sales analysis problem just so you don't ask us to change the billing form again." I am sure this sounds familiar to all of us and it is one of the matters you can expect when a problem is not realistically defined and solved the first time.

The Complete Solution:

This new problem was worked out in this manner:

1. The company's analysis led them to the conclusion that a punched-card tabulating system was the best available means for

producing the more elaborate sales statistics. This would be handled by key-punching a card for each line item on the invoice, plus the necessary codes, and then sorting, summary punching, and tabulating the reports.

2. They decided that as long as they must cut a card for the dollars of each item on the invoice they might as well add units and run unit sales reports. This eliminated the tally of billings being performed manually.

3. Their analysis then raised the point that as long as they would have a deck of cards containing all this information, it was a shame to use it only once or twice for sales and unit analysis. Perhaps they should provide for customer header cards and run their billings from punched cards, using the same cards later for sales analysis.

4. The next logical step was to summary punch the billing cards for each invoice which could then be filed as an accounts receivable record in lieu of a file of invoice copies.

5. They then reasoned that as long as they must punch a card for each item in order to bill, they might as well punch up a supply of cards ahead of time and put them in a tub file. Then, when a customer's order was processed they could pull a set of header cards and the appropriate pre-punched item cards and have their deck ready for billing.

6. A final refinement was to conclude that if they were going to have a tub of cards with items and quantities punched in them they would gain an advantage by having the cards in the tub equal the quantities on hand. This provides a control over inventories and automatically tells you, before the billing is prepared, when an item is out of stock and must be back ordered.

On the basis of providing for this complete cycle of work to be handled by means of punched cards an installation was economically justified with a sufficient margin to absorb the man's two-year supply of obsolete billing forms.

In this example I have been discussing a solution brought about through use of punched cards. However, do not conclude that I suggest punched cards as the universal answers to these problems. The approach applies equally well to alternative systems. No two companies and no two problems are exactly alike. If they differ only to the extent that the personalities in the situation are different, that factor may

often be the deciding one. There are few standard systems which meet everyone's requirements.

The conclusion to be drawn from this example is the necessity to approach the problem on the basis of cycles of work and not expect sound, lasting, results from a piece-meal approach.

The necessity for boldness in challenging accepted practices should also be emphasized. Let us not confuse "means" of performing a given set of procedures with the "ends" or basic objectives we seek. We must stand far enough back from the details to be able to see the overall problem and then ask ourselves this question, "If I were to start these procedures from scratch, what would I seek to accomplish?" It is only after this is done that we are in a position to determine the best "means" or methods to be employed.

Determine and Evaluate Alternatives

Once we have defined the problem, determined objectives, and selected a complete cycle of work, we must find and evaluate the alternative courses of action. This involves answering the familiar questions: Who? What? When? Where? Why? How? It should also include measurement of the volume of transactions and work load.

Present Procedures:

The first step in this phase is to find out exactly what is now being done. This step is not as easy as it may appear. In some of your companies you no doubt have detailed procedure manuals. In some you may have little or nothing in written or manual form. In any event it is urged that caution be used in relying on the written procedures. Deviations, changes, and exceptions which creep into so-called "standard" procedures are often startling. There is no real substitute for taking a look at the actual operations as they are currently performed.

For an easy verification of this, it is suggested that you take a look at the file copies of completed forms, such as invoices, receiving reports, purchase orders, remittance advices, etc., and observe the number of instances where spaces on the form are never used; information is entered in places other than those provided; additional information is required and entered which has not been provided for; information is incomplete; and other deviations from standard practice exist.

The most satisfactory method is to take yourself through the entire cycle being examined and determine all the steps and operations

that take place. You then know what actually goes on rather than what is supposed to go on.

Once the facts have been determined they must be organized in such form as will permit them to be evaluated. The choice of method to be used depends to some extent on the complexity of the procedure. Some of the available methods are:

1. Write up procedure in narrative form.
2. Outline procedure as a listing of steps - in sequence.
3. Lay out copies of actual forms and records on a large sheet in what could be called a "paste-up flow chart" and add any notations required to explain the procedure.
4. Prepare a flow chart, using symbols for the various forms and records involved.

My personal preference is for the flow chart accompanied by copies of the forms, records, and reports so they can be examined in conjunction with the chart. If a flow chart is properly set up it is virtually impossible to prepare it if you do not have all the facts. The least effective way to present the facts on a procedure is probably the narrative form.

The second step in this phase is to determine the defects in present procedures using present methods and equipment. Obviously one alternative course of action is to continue with your present practices. However, this should be accomplished on the basis of continuing these practices as they should be performed, which is not necessarily the way they are performed today.

There is another important reason for this step. In too many instances, management is prone to discard one method in favor of another, without first determining whether present methods are basically sound if properly set up and administered.

Before valid comparisons can be made, the present method must be placed in its best form. For example, if you costed out your present billing procedure you might come up with a cost of $1.00 per invoice processed. Some alternative method may produce an invoice for 85 cents. It is entirely possible that opportunities exist for improving present methods that could reduce the per invoice cost to 75 cents. These improvements should be sought before any final comparison is made.

The next step is to select and evaluate alternative courses of action other than the one you are now using.

It is difficult to discuss specific methods with an audience such as this, representing a variety in types and sizes of business. However, we can cover some of the choices you may be expected to encounter.

Alternative Procedures - Billing:

(1) Sales Order - Depending upon the nature of the business a sales order may be received in a variety of ways and on different forms, i.e., company order blank from salesman, customer purchase order, via telephone, catalog order blank, in letter form, returned postcard, contract, etc.

One of the first alternatives, then, is to decide whether the order can be processed in the form received or whether it must be reduced to a standard company form. Obviously it would be desirable to be able to proceed without having to go through the additional work of rewriting the sales order. There are several directions you can go in solving this problem: (a) combine the order preparation as part of the invoicing or billing operation, i.e., prepare shipping document or production order simultaneously with invoice preparation; (b) revise the sales source documents so that they are in suitable form for processing immediately upon receipt; (c) provide encouragement to your customer to use your order form, such as including order blanks with catalogs; or (d) revise your procedures so that orders can be processed in original form.

In solving this problem it may be that you can not convert all orders to conform to the most desirable practice but can minimize the types of orders which require rewriting.

An example of what can be done in this area is that of a company selling items on credit by direct mail. The prior practice was to provide a return post card. However, the post card was not adequate for processing the order through the sales, credit, warehouse, and accounting departments.

It was possible to substitute a self-mailer order blank for the post card. This order blank had an envelope flap and could be folded, sealed, stamped, and mailed. This provided sufficient stationery for entering the information necessary for processing the order without rewriting.

(2) Pre-Billing - Another major alternative in billing operations is whether it is desirable or possible to prepare the billing before the order is assembled and shipped. This may often take the form of preparing a partial billing to which further information is entered at a later stage.

It is usually most advantageous to do a complete pre-billing job if the conditions permit. This can be extended to include the writing of the invoice, production or shipping orders, bills of lading, labels, packing lists, and other paper work in one writing or as few writings as possible.

The pre-billing method presents obvious savings in the clerical work of order writing and checking. However, it can not always be used where shipping document requirements vary substantially from invoice requirements; where a back order problem prevails; where it is not possible to pre-determine exactly what will be shipped or the quantity to be shipped.

However, before the pre-billing idea is abandoned altogether, you should investigate how far you can go in this direction. It is often possible to pre-bill or rather pre-write the majority of information at one time, with the additional data being entered when they become known.

This is sometimes accomplished through use of an order invoice set of forms, either in fan-fold or snap-out carbon form, so arranged that when the pre-determinable data are entered the shipping order copies can be detached from invoice copies. Later in the process the invoices are completed by adding the variable data.

A Ditto or other duplicator type system is particularly suitable here. This system provides for entering predeterminable data on a master from which shipping orders, packing lists, etc., are run. Later the quantities, shipping dates, extensions, etc., are added to the original master which is then used to reproduce invoice copies. This system can usually be so arranged that all the documents required for processing the order through to final billing can be produced at whatever stage in the process they are required. For example, a single master is used for billing each shipment when an order is to be shipped partially on different dates or when items are back ordered.

A good example of the use of pre-billing where a complete invoice cannot be prepared in advance is a method used in some packing houses. Here the variable is weight, which cannot be known until the product for each order is selected and weighed.

The procedure is to prepare an invoice-loading ticket set complete except for weight, extensions, and footings. Labels and tags are made up from the invoice for each item on the order. Each label carries the item and quantity ordered and is sent via pneumatic tubes to the various departments in the plant. The loading ticket is sent to an

assembly cooler to await the product from the processing departments.

As the orders are filled the tags and labels are attached to the pieces or packages and gross and tare weights are marked. The product then moves to the assembly cooler.

The various items on an order are assembled and the gross and tare weights are entered on the loading ticket which goes to the billing department. Here, they are matched up with the invoice copies; net weights are computed and entered on invoice forms; extensions and footings are added to complete the billing operation.

This method provides many of the advantages of pre-billing even though a complete invoice cannot be prepared prior to shipment.

In many billing situations everything can be entered on the invoice in advance of shipment, except freight, express, or parcel post charges. While this may not present too much of a problem, it does require a separate operation which should be avoided if at all possible. In some instances an investigation will disclose that a handling and shipping charge, based upon estimated weight, dollar amount of invoice, or some other basis approximating actual freight or postage, can be developed and applied to the invoice in advance of shipment.

(3) Invoice Content - An investigation of the information to be included on an invoice or billing often provides an opportunity for improvement. Every item of information should be tested three ways, i.e., (a) Is it essential for our own or customer use? (b) Can it be pre-printed? (c) Can it be abbreviated?

We recently had occasion to review the billing operation of a client whose billing was becoming a bottleneck in the flow of orders. As part of the work we examined all invoices for a representative period of time.

This examination revealed an unusually large number of invoices requiring more than one invoice form per billing. Some of these ran into 2, 3, and 4 forms. A further analysis revealed that there were two classes of products accounting for a large proportion of total sales and billings. One was a line of products carried in 48 colors, but with the same price for each color. Invoices for these items showed the quantity, unit price, and extension for each color billed.

The other classification was a line of products which was sold cut to size, i.e., 4' x 8', etc., but which was priced by square footage, i.e., 32 sq. ft., regardless of the dimensions. Invoices showed the num-

ber of pieces of each size, square footage, unit price per square foot, and extension.

A revised procedure was recommended and installed. A color list and a size list were prepared on a pre-printed snap out carbon form in two copies. In writing the billing the entry was limited to "200 gross of Item A, colors per attached list," with one price and extension, or "1,000 sq. ft. of item B, sizes per attached list," also with one price and extension.

The order writer would enter, by hand, the quantity of each color and size on the pre-printed lists or "laundry tickets" as they have come to be called. One copy was attached to the shipping copy for use in filling the order. The other copy went to the customer attached to his copy of the invoice.

This procedure has been in effect about six months and no internal or customer complaints have been experienced. The increased productivity in the billing department has been substantial.

In another situation the client was using one standard type of form for all billings. An analysis disclosed that there were really two separate classes of customers. One of these classes almost always ordered at least one of three products and only occasionally anything else.

This matter was resolved by using a different form for the special customer class on which the names of the three popular products were printed with space for one or two additional items. The customers' names and addresses are entered from addressograph plates and the other information is hand written.

This illustrates that standardization is not always a virtue. In order to obtain the benefits of being able to pre-print recurring information it may be advantageous to forego standardization and adopt a different practice for a special class or type of work.

(4) Order Filling and Shipment - In any order processing and billing operation provision must be made to furnish a suitable document, or documents to be used in picking and assembling the order for shipment. The method to be used depends upon a number of factors including the location and arrangement of finished goods warehouses; the number of items comprising the typical order; the time available between receipt of order and time of shipment.

In many instances a shipping copy of the invoice prepared simultaneously with the invoice will suffice. In other situations it is advan-

tageous to prepare a ticket for each invoice item, such as we discussed in the packing house example.

If individual tickets are desirable there is a choice of preparing tickets in advance to be pulled for each order and sent to warehouse and storage locations for filling or to prepare tickets for each order as received.

Individual item tickets can be prepared on typewriter, by addressograph plates, by duplicator master, or by punched-card tabulating machines.

In some punched-card tabulating systems, order picking tickets are prepared as part of order processing which show the order number, item description, quantity, and storage location. By sorting these cards in proper sequence the task of picking stock can be expedited by routing the stock picker's trip in a logical manner.

Alternative Procedures - Accounts Receivable:

(1) Ledger vs. Ledgerless Accounts Receivable Records - One of the first alternatives which must be resolved is whether you require posted accounts receivable records or whether an open file of invoice copies will suffice. You may be surprised to find that the open file method offers advantages in many instances where hand or machine posted records are now being used.

At first glance there is a natural reaction to look upon the open file as hazardous. What would happen if an invoice copy were lost? What difficulty can we expect in balancing these open files to controls? How can statements be prepared? How will credit department requirements be met? Obviously such questions must be answered and answers will depend upon the requirements in each case. However, this method offers advantages in economy, simplicity, and flexibility which warrant examination.

It is suggested you take a second look at this method if your examination reveals any of these conditions prevail:

(a) Average order size is small.

(b) Average customer purchases only a few times per year so that normally one charge is paid before another charge is entered.

(c) Number of accounts is large.

(d) Customers normally pay invoices in full rather than make partial payments on account.

(e) Statements are not required or simple open item statements will suffice.

In evaluating the possibility of using this method you should consider these requirements:

(a) All billings, cash, credits, or other sources of change to accounts receivable records be pre-totaled independently of accounts receivable personnel.

(b) Use of more than one control account to isolate errors and minimize balancing work. This also permits work to be spread among a number of clerks with a control over each one.

(c) Filing cash receipts media and paid invoices by day and control account number in lieu of a detailed written cash receipts record.

(d) Establishing control so that access to accounts receivable files is limited to clerks responsible for the files, and their immediate supervisors. These files should be considered as the equivalent of cash and be subjected to comparable safeguards. Provision should be made for additional billing copy files at other locations, for reference purpose, so that accounts receivable records are not disturbed for that purpose.

(e) Providing for a system of dividers and tab signals to facilitate credit work and agings.

(f) Preparing additional copies of invoice marked "statement". When this method is used the accounts receivable copy plus one or two "statement" copies are filed in the accounts receivable trays. On the appropriate day the statement copies are pulled and mailed. In instances where an account is paid before the statement copies are used, these copies are destroyed. After statement copies are used and the account is still unpaid, the credit department takes over.

As an example of the use of this system, I can cite a case where 25,000 accounts are handled in this manner. Invoices are filed in drawers built into a safe. There is a control account for each drawer. Trial balances are taken off the several drawers on a cycle basis so that all controls are balanced once each quarter. At the end of each quarter an aged trial balance is prepared.

Differences have been experienced in balancing detail to controls. However, the discrepancies have been small and no attempt is made to locate differences falling within a certain tolerance. Net differences over a year's time have been negligible.

Hand or machine posted accounts receivable records have feat-

ures such as permanence, providing historical record for credit purposes, providing statements prepared simultaneously with ledger posting, greater facility in handling partial payments, etc., which may be essential. A final selection of method must be based upon the requirements of the individudal situation.

(2) Statements - A company often has an alternative as to whether statements shall be prepared at all, and if so, what type of statement. Current trends appear to favor discontinuing statements, particularly where customers are other business firms. Good internal control practices in a business firm require that each payment be supported with an original copy of an invoice rather than a monthly statement. This trend is also related to the gradual disappearance of the conventional accounts payable ledger wherein statements were used to verify account balances.

In any event, if you are now preparing statements you would do well to question this practice. The answer may be that while they are required for certain classes of accounts they can be discontinued on other classes. This possibility should be considered.

If statements are required, you have a choice in the form of statement to be used. Some statements show a total open balance only; others show all open items; others are a complete record of all transactions for the period. In some billing situations - department stores, for example - it has become general practice to return original sales tickets to the customer with his statement after they have been microfilmed. This reduces the amount of detail which must be shown on the statement.

The type of business you are in and the requirements of your customers will determine the type of statement best suited to your needs.

(3) Cycle Billing - Many businesses, particularly in the retail and utility fields, have utilized cycle billing to good effect. This plan presents advantages in providing an even work load, and in speeding up posting by posting all debits and credits to an account only once each billing period. However, there are problems such as educating your customers to accept this method and possible delays in cash receipts where customers tend to pay at month-end regardless of the time the bill is received.

(4) Cash Discounts - In any review of receivables operations the question of cash discounts must be resolved. There is no one answer to this question as custom, trade practice, and competitive conditions play a large part in this decision. However, cash discounts in some

lines of business tend to take the form of trade discounts or price reductions rather than real incentives for the prompt payment of invoices. The presence of cash discounts poses procedural problems to both parties to the transaction. There is also the problem of what do you do with an account that takes the discount whether he pays within the discount period or not.

If you look upon cash discounts as real incentives to payment, or stated another way, as the price you are willing to pay for raising cash, you will find it to be a very high price to pay compared to other methods of acquiring working capital. To the extent you are not enforcing discount terms you are paying an even higher price.

For example, if your terms are 2% 10 days net 30, you are saying that you are willing to pay 2% to get the customer to pay 20 days earlier than you can require him to pay. The price for these funds is equivalent to 2% for 20 days or approximately 36% per year. Looked at in this way the question assumes more serious proportions.

One simple test can be made at the start of your investigation of this question. For example: if your average receivables are $100,000 and annual sales are $1,200,000, your turnover is 12 times per year. Stated another way: you are, on the average, carrying 30 days' worth of sales as receivables. Now, if your terms provide 2% 10 days net 30 days, this means that customers are not taking advantage of your discount and paying within the 10 days, or a large proportion are paying later than 30 days.

If this test indicates that you are carrying receivables significantly in excess of your discount period the value of the cash discount feature or its administration is subject to question.

(5) Agings - An essential operation in most receivables operations is the preparation of aged trial balances of accounts receivable for credit control purposes. In evaluating alternative types of accounts receivable methods your aging requirements must be considered. This problem really breaks down into two parts, i.e., the use of signals, tabs, or other means to continuously locate past due accounts for day to day credit work and the need to prepare statistical summaries for the financial and credit management which are more concerned with the overall position of the receivables than with individual accounts.

In those situations where statistical analysis is frequent and in volume, punched-card systems offer the best features. Bookkeeping machine methods rate next, as aging data can often be secured as a by-

product of carrying balances forward at period-end. Ledgerless and hand written systems probably rank last on this requirement.

Alternative Procedures - Accounts Payable:

(1) Purchase Order - Receiving Reports - Starting back in the accounts payable cycle with the purchase order, there is a choice in how the purchase order and receiving report shall be related.

Provision can be made for writing a separate purchase order and later a receiving report to be matched up and compared to the vendor's invoice as part of the accounts payable procedure. In using this method, partial receipts are usually recorded on a copy of the purchase order.

There is an alternative procedure which has certain advantages where it can be applied. Purchase orders are prepared on a Ditto, Multilith, or similar duplicating machine master. Copies of the purchase order are run off and distributed.

The master is then sent to the receiving location where it is used to write the receiving report. As items are received the purchase order master is removed from a file; a variable strip master is laid over the purchase order master, and the quantity received, date, balance on order, and other receiving information are entered. The two masters are then put in the duplicating machine and receiving report copies are run off.

Some of the advantages of this method are:

(a) The duplicate writing of vendor name, item descriptions, and other information, which must be on both the purchase order and receiving report, is eliminated.

(b) It eliminates the problem found in some businesses where the item descriptions on the purchase order, packing lists, and vendor invoices may differ. When the purchase order and receiving report are later matched in accounting and compared to the vendor's invoice, the untrained person does not know if the item ordered and item received are the same or not.

Under this procedure, identification must be made at the receiving point and the purchase order and receiving report carry the exact same nomenclature.

(c) Each person getting a copy of the receiving report has a record of the quantity ordered, quantity received, and balance on order without the necessity for receipts and balances to be posted at more than one place in the organization.

(2) Voucher System vs. Straight Accounts Payable System - Another choice to be made is between an accounts payable system involving an accounts payable ledger with an account for each vendor or a voucher system using a voucher as a record of the liability.

It could no doubt be proven that the accounts payable ledger system is gradually disappearing in favor of the voucher system. As we noted earlier, this has tended to eliminate use of monthly statements in many instances. The voucher system eliminates the necessity to maintain accounts payable ledgers and provides a variety of alternatives as to when vouchers and checks shall be written and entered.

Invoices can be accumulated until payment date and then be pulled and vouchers prepared. This permits the maximum number of invoices to be paid by a single check but fails to record liability on the books until month-end unless handled as a separate operation.

Each invoice can be prepared as a separate voucher as received and be paid immediately after receipt or at discount date. This may be a desirable method where it is unusual to have more than one invoice per vendor during a pay period.

Invoices can also be entered on vouchers as received and audited, and the voucher can then be held open for posting additional invoices received from that vendor up to the payment date. The voucher is then closed and a check is prepared.

(3) Voucher Distribution - A selection must be made of the method to be used to distribute the accounts payable charges as well as to accumulate the liability and make disbursement. Some of the alternatives are:

(a) Distribute manually to columnar journals as a separate operation or as part of voucher preparation using a writing board.

(b) Distribute on a bookkeeping machine at the time of voucher preparation either to a distribution ledger card for each account; a columnar journal sheet; or to unit tickets to be sorted and posted as a subsequent operation. It is possible to utilize this method in such ways as to obviate the need for a written voucher register and check register. Vouchers are written and distributed in one operation on a bookkeeping machine. One copy of voucher is filed by check number to serve as a check register. Another copy is filed alphabetically with supporting invoices, receiving report, and other papers attached, as the voucher record.

(c) Distribute vouchers as an entirely separate operation from voucher and check preparation, either manually or on a machine.

(d) Utilize a punched-card system which provides for writing the remittance advice or check and distributing the charges as a by-product of recording payables and disbursements.

(4) Cash Discounts - Obviously one of the objectives in a payables operation is to process the paperwork in sufficient time to obtain all discounts. This is often difficult where the geographical distances between the receiving points and the accounts payable department are great, or where detailed inspection procedures or other operations delay the processing of receiving reports and other paperwork.

Some companies dealing with vendor sources of long standing process all invoices with established vendors at once, or by discount dates, without waiting for supporting evidence to come through. They feel that the discounts are worth the risk of not being able to adjust discrepancies with vendors after the charges are paid. The treasurer of a company following this practice told me a few weeks ago that their losses over the many years this policy has been in effect have been zero.

This problem can also be approached by seeking means of speeding up the reporting of receipts and auditing of vouchers. The other day I was in a plant using an internal teletype system for receiving reports. Receiving stations put out receiving reports over the teletype which immediately reproduced a receiving ticket in the Purchasing, Material Control, and Accounting Departments.

(5) Other Plans - A representative of one of the large accounting machine companies recently told me that in his opinion there were about as many accounts payable systems as there were people dreaming them up. This emphasizes the wide variety of choices in this area and the fact that there is no one answer. The fact that there are so many choices increases the odds that if you re-examine your procedures you can find improvements.

Alternative Procedures - Machinery and Equipment:

This brings us to another set of alternatives which must be considered. What operations are to be performed mechanically? What equipment is to be used?

I note that you previously had sessions dealing with office equipment, forms, and machine accounting methods. Therefore, it would not be appropriate to cover this subject matter again. However, I would like to make a few observations on this matter of mechanizing accounting operations.

(1) Your systems problems should not be approached as if mechanization was going to be the only answer to the problem. It is urged that a systems approach be used, comparable to that which we have been discussing here. First, determine what your objectives are, i.e., what needs to be done and what is worth while doing. Consider as many alternatives as possible, both manual and mechanical.

High speed mechanical or electronic equipment applied to an improperly thought out system merely results in the production of the wrong answers faster.

(2) Companies often consider mechanical equipment, such as punched-card tabulating systems, to achieve speed or the ability to handle larger volumes of work. The first step should consist of a decision as to what that increased speed is worth. Ask yourself, "What would I, or could I, do more effectively if I had that information sooner?".

Before selecting equipment to solve a volume of work problem, you should determine why that work exists and why it is in such volume. Often a great volume of work is an "effect" rather than a "cause". First direct your effort to reduction of volume before you invest in equipment to perpetuate that volume.

(3) On the other hand, there is the danger that developments in the business machines field are being overlooked unless your company makes a continuous planned effort to keep up. The new equipment for business applications which has been coming out at an ever increasing rate, particularly since World War II, is truly amazing. A company could very easily fall way behind the field if its eyes are closed to this progress.

(4) Once equipment has been decided upon and acquired it must be closely controlled to avoid being used for auxiliary jobs merely because it is available and capable. Punched-card tabulating equipment is particularly vulnerable to such abuses and new electronic installations will be even more vulnerable. Installations have been made to perform certain functions which have been thoroughly studied in advance. As people in the organization become familiar with it they become intrigued and start devising other jobs for it to perform. These new jobs are usually not subjected to the same analysis and study as was made for the original applications. This can easily be carried to the point where the installation is no longer capable of performing the original work effectively.

Other Considerations

Degree of Accuracy:

How far do you go in any systems installation in providing checks and controls to assure accuracy? The answer to this question requires a determination of the potential loss which could result from errors. The potential loss may not be susceptible to dollar measurement, i.e., damage to customer relations through failure to render an accurately computed invoice or a correct monthly statement. There are other elements which cannot adversely affect outsiders, where you have a choice, i.e., accounts payable.

There has been considerable advance in applying statistical methods, particularly sampling techniques, to accounting operations. Vendors' invoices are particularly susceptible to such techniques. This approach can be applied with a considerable degree of precision through mathematical means or reasonable answers can be derived from more or less "rule of thumb" methods.

An ever increasing number of companies are finding out that the cost of a 100% verification of accounts payable invoices is uneconomical in terms of the cost of verification compared to potential losses. This condition may well exist in your company.

It is suggested you explore this area by determining three things:

(1) How does a representative sample of vendors' invoices fall by size, i.e., per cent under $50, under $75, under $100, etc.?

(2) What is the error experience, by type of error, in each selected category?

(3) What is the cost of verifying vendors' invoices?

An analysis of such data can lead to a decision as to the point at which the cost of verification exceeds the potential loss through error. As a safeguard you can provide for checking 100% of all invoices for selected periods during a year to assure that your experience has not changed. Perhaps you could substitute a "sight check" for complete computational verification of invoices.

The degree to which this approach can be used depends, of course, on the nature of your purchases and the companies with whom you are doing business. However, the potential savings make this an area worth exploring.

Standardization:

The terms "standard" and "standardization" carry a connotation of desirability which is not always true. A balance between extremes

must be obtained. Standardization is not all good, per se. Recognition must also be given to those exceptions which are more effectively handled by non-standard means. The degree to which you are going to standardize procedures and the degree to which you are going to permit deviations to exist is one of the alternatives to be considered.

The need or desirability of standardization tends to increase with each increase in mechanization of procedures. The more you mechanize, the more you must reduce the opportunity for the people involved to exercise discretion over exceptions. This reaches the ultimate point in electronic equipment where the presence of exceptions over-encumbers the equipment if handled mechanically, or reduces the advantages of the equipment if too many exceptions remain for manual processing.

Centralization vs. Decentralization:

The problem of centralizing or decentralizing accounting functions, including receivables, billings, and payables, in a multiplant firm is a difficult organization question. This matter must be resolved at an early stage in any systems review as the answer may well dictate the type of system and equipment to be employed. (We are using centralization vs. decentralization here in terms of where the functions are to be performed.)

However, this decision cannot necessarily be made on the basis of systems considerations alone. Other considerations are:

(1) The organization plan of the company and the authority and responsibility delegated to the persons and units involved.

(2) Who uses the records and how accessible they need to be?

(3) How rapidly must data be made available when needed?

(4) What problems exist in securing uniformity? How important is uniformity?

(5) What degree of decentralization exists in the accounts?

(6) The requirements for maintaining internal control over these functions.

The two most important of these considerations are probably the need for accessibility and reliability. In most instances these two requirements are served best through decentralization of record keeping.

(1) Accounts Receivable - These operations ordinarily involve a number of departments, i.e., sales, credit, shipping, billing, and accounts receivable. In handling accounts receivable it is probably most

important to locate records where the credit function is located to provide accessibility to records. A decentralized credit function is usually the better where customers are small, local concerns. A centralized credit function is usually most applicable where customers are large concerns.

Therefore, it is usual to find the degree of centralization of accounts receivable to be dictated by the degree of centralization of credit functions. The clerical economy of a centralized receivables operation should also be considered in deciding how decentralized you permit credit and receivable functions to be.

(2) Billing - A better operation usually results if billing can be located together with the credit and receivable functions. This depends upon such factors as whether sales and shipments are made from branches or factories, and customer requirements such as necessity to furnish invoices with shipments. A recent study made by the Controllership Foundation in the United States concluded that location of the billing function was not a particularly critical problem and if there was sufficient volume for clerical economy most orthodox arrangements were satisifactory.

(3) Accounts Payable - The location of this function depends to a considerable extent on the location of the purchasing function. The study of the Controllership Foundation concluded that they were unable to determine important advantages one way or the other.

Where there is a centralized Purchasing Department and goods are received at a number of geographically separated plants or warehouses there is a problem of time, i.e., being able to process paperwork in time to make discount deadlines and to charge the accounts in the proper period. There are a number of ways of easing this situation, such as paying bills without waiting for receiving reports; using receiving reports to record charges without waiting for completion of the complete accounts payable procedure.

(4) Electronics Systems - Centralization versus decentralization is of prime importance to companies considering the acquisition of electronic data-processing equipment. The cost of this equipment and its ability to handle great volumes of work often requires a great degree of centralization of clerical work in order to achieve economies. However, this runs counter to the trend in industry to greater decentralization as units become larger. Therefore, to gain advantages of decentralization in authority and responsibility and also the advantages of

centralization in electronic data processing poses real problems to those companies considering electronic systems. This problem has led some companies to consider a number of smaller electronic computers rather than a single large unit so as to avoid disrupting a satisfactory decentralized setup. Others consider the advantages of electronic data processing to offset any disadvantages of abandonment of a certain degree of decentralization in management. At least one company has decided upon the rather unique solution of a centralized data-processing unit, continuation of decentralized management responsibility, but with division managers and controllers headquartered at the data-processing center rather than division locations.

Cost Control:

Accounts receivable, billings, and accounts payable are largely clerical functions, dealing with fairly uniform and continuous operations in considerable volume. They are among those office functions which most nearly resemble direct labor operations in a factory or shop. Yet, industry has done very little to apply measurements and controls to these clerical operations compared to industrial engineering techniques developed in the direct labor area of cost.

As mentioned at the very beginning of this talk, I wonder how many of us have available and review such simple statistics as: number of checks written, vouchers processed, billings prepared, accounts posted, cash remittances received, etc. How many of us compare such data to persons involved or payroll cost to get some measure of productivity? How many of us compare such data to prior periods, compare one plant against another, or otherwise evaluate performance? The answers to these questions will no doubt be negative responses in many instances.

It is not possible to go into this area of control in detail here. The degree to which this area presents opportunities for improvement and cost reduction will depend upon the nature, size, and complexity of your particular business.

I would like to bring to your attention, as an example of the activity in this field, the approach taken in a new "Expense Center Accounting Manual" recently published by The Controllers' Congress of the National Retail Dry Goods Association.

This new manual proposes a two-pronged approach to expense control, (1) establishment of expense centers represented by principal jobs of work such as accounts receivable and accounts payable and

(2) productivity measurement through selection of an appropriate unit of measure for each expense center.

The objectives are to identify and account for the controllable expenses in an expense center and through application of a unit of measure determine:

(1) The work load - or amount of work done.

(2) Unit productivity - or speed of doing the work.

(3) Effective pay rate - or the unit cost of the labor doing the work.

This manual spells out in some detail how these techniques are applied. They are not particularly complicated and provide control data far superior to traditional methods of expressing payroll and other expenses as percentages of sales without being related to the work performed, productivity, or other factors.

Business Week Magazine recently carried an article on this new approach by the N. R. D. G. Ass'n. which cited this example on accounts payable costs:

The traditional accounting method would show a favorable reduction in cost:

	1952	1953
Store sales up 20%	$10,000,000	$12,000,000
Payroll costs up 9.7% . .	21,000	23,040
Payroll per cent of sales.	.21%	.19%

The new method is much more analytical and shows a different result:

	1952	1953
Invoices processed went up	70,000	72,000
Payroll cost per invoice rose	$.30	$.32
Units of work per $100 of sales went down	.7	.6
Average hourly wage down	$1.15	$1.12
More man-hours were required to process greater number of units . . .	18.261	20.571
Fewer units were turned out per man-hour	3.83	3.5

Therefore effective pay rate went up from 30¢ to 32¢; the work produced per $100 of sales went down from .7 to .6; and the units produced per man-hour went down from 3.83 to 3.5.

Certainly, this new method pin-points this problem in such a way that effective corrective action can be taken.

CONCLUSION

In our review of this subject, we have looked at the importance of reexamining our payable, billing, and receivable operations in order to do a more effective job of "funds management", to increase our profits, and to cope with changes which continually occur in any business.

We have considered how these problems should be approached and some of the alternatives which must be considered.

I think we should conclude by resolving to do something about these matters. We should also resolve that we will not make changes unless we have been sufficiently thorough to be certain any change we make will be a step forward. I once received this sound piece of advice which I would like to pass on to you, "Do not confuse activity with accomplishment or change with improvement."